

## ABSTRACT

Disclosed is a method for in-situ sampling and measuring particulate fineness in a  
5 process stream, comprising (a) sampling particles in-situ from a process stream, (b) adjusting the  
sample to conditions suitable for LII, (c) measuring the fineness using LII, and (d) correlating the  
LII fineness measurement with actual particle fineness. Also disclosed is a method for sampling  
and controlling a process based on the real-time, on-line, in-situ methods for sampling and  
measuring particles. Sampling can comprise drawing a sidestream from a source of the  
10 particles. Adjusting the sample to conditions suitable for LII can comprise diluting the sample or  
bringing the temperature of the sample to ambient conditions. Correlating may comprise using a  
correlation function determined by comparing LII measurements and laboratory fineness  
measurements for particle samples drawn at the same time